



SEQUENCE LISTING

		•						-								
<1	10> N	laeda 'aguc														
<1	20> 1	IOVEL	HEMO	OPOI	ETIN	RECI	EPTOI	R PRO	OTEIN	, N	R10					
<1	30> 0	6501	-0960	001												
	40> U 41> 2															
	50> E 51> 2				6											
	50> 3 51> 1															
	50> 3 51> 1															
<1	60> 4	0														
<1	70> F	`astS	EQ fo	or W	indov	vs Ve	ersio	on 4	. 0							
<2 <2	10> 1 11> 2 12> E 13> F	969 NA	sapie	ens												
<2	20>															
	21> C 22> ((2	2478)											
< 4	00> 1															
cg	cttat	aaa													ttgggg gtaata	
ac	cagca	tgg	tacta	aaata	ag ac	ccat	gaaaa	a ga	catgt	gtg	tgc	agta [.]	tga a	aaati	tgagac	180
															ctcaag caatcc	
at	ttccc	agc	ataaq	gtgg	gt aa	agtgo	ccact	tte	gactt	ggg	ctg	ggct	taa a	aagca	acaaga	360
															taaagt tgcaaa	420 480
tc	ctttg	agc	cagca	agaa	ca to	ctgt	ggaa	c ato	cccct	gat		-	_	ctc t Leu S		534
	c caç o Glr															582
	g ato p Met															630
aa	g cct	gag	aac	att	tcc	tgt	gtc	tac	tac	tat	agg	aaa	aat	tta	acc	678

Lys Pro Glu Asn Ile Ser Cys Val Tyr Tyr Tyr Arg Lys Asn Leu Thr tgc act tgg agt cca gga aag gaa acc agt tat acc cag tac aca gtt 726 Cys Thr Trp Ser Pro Gly Lys Glu Thr Ser Tyr Thr Gln Tyr Thr Val aaq aga act tac gct ttc gga gaa aaa cat gat aat tgt aca acc aat 774 Lys Arg Thr Tyr Ala Phe Gly Glu Lys His Asp Asn Cys Thr Thr Asn agt tet aca agt gaa aat egt get teg tge tet ttt tte ett eea aga 822 Ser Ser Thr Ser Glu Asn Arg Ala Ser Cys Ser Phe Phe Leu Pro Arg ata acg atc cca gat aat tat acc att gag gtg gaa gct gaa aat gga 870 Ile Thr Ile Pro Asp Asn Tyr Thr Ile Glu Val Glu Ala Glu Asn Gly 105 110 gat ggt gta att aaa tct cat atg aca tac tgg aga tta gag aac ata 918 Asp Gly Val Ile Lys Ser His Met Thr Tyr Trp Arg Leu Glu Asn Ile 120 125 gcg aaa act gaa cca cct aag att ttc cgt gtg aaa cca gtt ttg ggc 966 Ala Lys Thr Glu Pro Pro Lys Ile Phe Arg Val Lys Pro Val Leu Gly 135 140 atc aaa cga atg att caa att gaa tgg ata aag cct gag ttg gcg cct 1014 Ile Lys Arg Met Ile Gln Ile Glu Trp Ile Lys Pro Glu Leu Ala Pro 150 gtt tca tct gat tta aaa tac aca ctt cga ttc agg aca gtc aac agt 1062 Val Ser Ser Asp Leu Lys Tyr Thr Leu Arg Phe Arg Thr Val Asn Ser 165 acc agc tgg atg gaa gtc aac ttc gct aag aac cgt aag gat aaa aac 1110 Thr Ser Trp Met Glu Val Asn Phe Ala Lys Asn Arg Lys Asp Lys Asn 190 caa acg tac aac ctc acg ggg ctg cag cct ttt aca gaa tat gtc ata 1158 Gln Thr Tyr Asn Leu Thr Gly Leu Gln Pro Phe Thr Glu Tyr Val Ile gct ctg cga tgt gcg gtc aag gag tca aag ttc tgg agt gac tgg agc 1206 Ala Leu Arg Cys Ala Val Lys Glu Ser Lys Phe Trp Ser Asp Trp Ser caa gaa aaa atg gga atg act gag gaa gaa gct cca tgt ggc ctg gaa 1254 Gln Glu Lys Met Gly Met Thr Glu Glu Glu Ala Pro Cys Gly Leu Glu 230 235 ctg tgg aga gtc ctg aaa cca gct gag gcg gat gga aga agg cca gtg 1302 Leu Trp Arg Val Leu Lys Pro Ala Glu Ala Asp Gly Arg Arg Pro Val 245 250 260 cgg ttg tta tgg aag aag gca aga gga gcc cca gtc cta gag aaa aca 1350 Arg Leu Leu Trp Lys Lys Ala Arg Gly Ala Pro Val Leu Glu Lys Thr



	265	270	275
	Ile Trp Tyr Tyr	cca gaa agc aac act aa Pro Glu Ser Asn Thr As 285 29	n Leu Thr
		cag ctt gaa ctg cat ct Gln Leu Glu Leu His Le 305	
		tct tat aat tct ctt go Ser Tyr Asn Ser Leu Gl 320	
		gct att caa gaa aaa to Ala Ile Gln Glu Lys Se 335	-
		gtt gct gag gac cag ct Val Ala Glu Asp Gln Le 350	
	Ser Ala Leu Asp	gtg aac act tgg atg at Val Asn Thr Trp Met Il 365 37	e Glu Trp
		acc acc ctt tcc tgg ga Thr Thr Leu Ser Trp Gl 385	
		cag caa gat aaa tta aa Gln Gln Asp Lys Leu Ly 400	
		cca atg ttg cat gac aa Pro Met Leu His Asp Ly 415	
		gcc aaa gaa ggc gtt co Ala Lys Glu Gly Val Pr 430	-
	Lys Val Glu Asn	att ggc gtg aag acg gt Ile Gly Val Lys Thr Va 445 45	l Thr Ile
		gag aga aag ggt atc at Glu Arg Lys Gly Ile Il 465	
		ggt gga aaa gga ttc to Gly Gly Lys Gly Phe Se 480	
		ggc ctg gag tcc ctg aa Gly Leu Glu Ser Leu Ly 495	

														gga Gly 515		2070
														ttt Phe		2118
						-								ctc Leu		2166
				_									_	act Thr		2214
														gcc Ala		2262
														tct Ser 595		2310
														acc Thr		2358
														aat Asn		2406
														aaa Lys		2454
					gaa Glu 650			taga	aatto	ctg t	ctto	cctgo	cc ca	aactt	caat	2508
tgca ctgc catg ttaa atgc acta ccaa <210 <211	ngagt nggtat ngagaa naato tact naaaa n> 2	ctt t cgt g agt c gct t act t ctc t aag a	ccaa ggtct ctgtt ctgt ctat	actaq ttttq tatta tatta tacta	gg aa cc ac aa gt cg gg at tt	agact cacat cagao gcctt ctcat catgt	gaat ggad gtgtg tcad gtaa aata	ctocca caca caca ctaca ctaca	gtggc cctac aacat aaaa ctata atact	eccc egga eggt agc actt	tgca tato cata ctat	ngaad natct ngtaa natad nacta	cca to get a	ctco aatgo ggaao ttto tcat	aggaca cgaaga catgtg cagctt catgta cgtaat cccact	2568 2628 2688 2748 2808 2868 2928 2969
	?> PF															

Met Lys Leu Ser Pro Gln Pro Ser Cys Val Asn Leu Gly Met Met Trp

601

<213> Homo sapiens

<400> 2

10 Thr Trp Ala Leu Trp Met Leu Pro Ser Leu Cys Lys Phe Ser Leu Ala Ala Leu Pro Ala Lys Pro Glu Asn Ile Ser Cys Val Tyr Tyr Tyr Arg Lys Asn Leu Thr Cys Thr Trp Ser Pro Gly Lys Glu Thr Ser Tyr Thr 55 Gln Tyr Thr Val Lys Arg Thr Tyr Ala Phe Gly Glu Lys His Asp Asn 70 Cys Thr Thr Asn Ser Ser Thr Ser Glu Asn Arg Ala Ser Cys Ser Phe Phe Leu Pro Arg Ile Thr Ile Pro Asp Asn Tyr Thr Ile Glu Val Glu 100 105 Ala Glu Asn Gly Asp Gly Val Ile Lys Ser His Met Thr Tyr Trp Arg 120 Leu Glu Asn Ile Ala Lys Thr Glu Pro Pro Lys Ile Phe Arg Val Lys Pro Val Leu Gly Ile Lys Arg Met Ile Gln Ile Glu Trp Ile Lys Pro 150 155 Glu Leu Ala Pro Val Ser Ser Asp Leu Lys Tyr Thr Leu Arg Phe Arg 170 Thr Val Asn Ser Thr Ser Trp Met Glu Val Asn Phe Ala Lys Asn Arg 185 Lys Asp Lys Asn Gln Thr Tyr Asn Leu Thr Gly Leu Gln Pro Phe Thr 200 Glu Tyr Val Ile Ala Leu Arg Cys Ala Val Lys Glu Ser Lys Phe Trp 215 220 Ser Asp Trp Ser Gln Glu Lys Met Gly Met Thr Glu Glu Glu Ala Pro 230 235 Cys Gly Leu Glu Leu Trp Arg Val Leu Lys Pro Ala Glu Ala Asp Gly 245 250 Arg Arg Pro Val Arg Leu Leu Trp Lys Lys Ala Arg Gly Ala Pro Val 265 Leu Glu Lys Thr Leu Gly Tyr Asn Ile Trp Tyr Tyr Pro Glu Ser Asn 280 Thr Asn Leu Thr Glu Thr Met Asn Thr Thr Asn Gln Gln Leu Glu Leu 295 300 His Leu Gly Gly Glu Ser Phe Trp Val Ser Met Ile Ser Tyr Asn Ser 310 315 Leu Gly Lys Ser Pro Val Ala Thr Leu Arg Ile Pro Ala Ile Gln Glu 325 330 Lys Ser Phe Gln Cys Ile Glu Val Met Gln Ala Cys Val Ala Glu Asp 345 Gln Leu Val Val Lys Trp Gln Ser Ser Ala Leu Asp Val Asn Thr Trp 360 Met Ile Glu Trp Phe Pro Asp Val Asp Ser Glu Pro Thr Thr Leu Ser 375 Trp Glu Ser Val Ser Gln Ala Thr Asn Trp Thr Ile Gln Gln Asp Lys 390 395 Leu Lys Pro Phe Trp Cys Tyr Asn Ile Ser Val Tyr Pro Met Leu His 410 Asp Lys Val Gly Glu Pro Tyr Ser Ile Gln Ala Tyr Ala Lys Glu Gly 420 425 Val Pro Ser Glu Gly Pro Glu Thr Lys Val Glu Asn Ile Gly Val Lys 440 445 Thr Val Thr Ile Thr Trp Lys Glu Ile Pro Lys Ser Glu Arg Lys Gly 455

Q1

```
Ile Ile Cys Asn Tyr Thr Ile Phe Tyr Gln Ala Glu Gly Gly Lys Gly
465
                    470
                                         475
                                                             480
Phe Ser Lys Thr Val Asn Ser Ser Ile Leu Gln Tyr Gly Leu Glu Ser
                                     490
Leu Lys Arg Lys Thr Ser Tyr Ile Val Gln Val Met Ala Asn Thr Ser
            500
                                505
                                                     510
Ala Gly Gly Thr Asn Gly Thr Ser Ile Asn Phe Lys Thr Leu Ser Phe
                            520
Ser Val Phe Glu Ile Ile Leu Ile Thr Ser Leu Ile Gly Gly Leu
                        535
Leu Ile Leu Ile Ile Leu Thr Val Ala Tyr Gly Leu Lys Lys Pro Asn
                    550
                                         555
Lys Leu Thr His Leu Cys Trp Pro Thr Val Pro Asn Pro Ala Glu Ser
                565
                                     570
Ser Ile Ala Thr Trp His Gly Asp Asp Phe Lys Asp Lys Leu Asn Leu
                                585
Lys Glu Ser Asp Asp Ser Val Asn Thr Glu Asp Arg Ile Leu Lys Pro
                             600
Cys Ser Thr Pro Ser Asp Lys Leu Val Ile Asp Lys Leu Val Val Asn
                        615
                                             620
Phe Gly Asn Val Leu Gln Glu Ile Phe Thr Asp Glu Ala Arg Thr Gly
                    630
                                         635
Gln Glu Lys Gln Phe Arg Arg Gly Lys Glu Trp Asp
                645
<210> 3
<211> 2440
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (523)...(1278)
<400> 3
cgcttataaa tgaatgtgtg cttaggaaca ccagacagca ctccagcact ctgcttgggg
                                                                       60
ggcattcgaa acagcaaaat cactcataaa aggcaaaaaa ttgcaaaaaa aatagtaata
                                                                       120
accagcatgg tactaaatag accatgaaaa gacatgtgtg tgcagtatga aaattgagac
                                                                      180
aggaaggcag agtgtcagct tgttccacct cagctgggaa tgtgcatcag gcaactcaag
                                                                       240
tttttcacca cggcatgtgt ctgtgaatgt ccgcaaaaca ttttaacaat aatgcaatcc
                                                                       300
atttcccagc ataagtgggt aagtgccact ttgacttggg ctgggcttaa aagcacaaga
                                                                       360
aaagctcgca gacaatcaga gtggaaacac tcccacatct tagtgtggat aaattaaagt
                                                                       420
ccagattgtt cttcctgtcc tgacttgtgc tgtgggaggt ggagttgcct ttgatgcaaa
                                                                       480
teetttgage cageagaaca tetgtggaac ateceetgat ac atg aag ete tet
                                                                       534
                                                Met Lys Leu Ser
                                                                       582
ecc cag cet tea tgt gtt aac etg ggg atg atg tgg ace tgg gea etg
Pro Gln Pro Ser Cys Val Asn Leu Gly Met Met Trp Thr Trp Ala Leu
5
                     10
                                          1.5
tgg atg ctc ccc tca ctc tgc aaa ttc agc ctg gca gct ctg cca gct
                                                                       630
Trp Met Leu Pro Ser Leu Cys Lys Phe Ser Leu Ala Ala Leu Pro Ala
                 25
                                                          35
aag oot gag aac att too tgt gto tac tac tat agg aaa aat tta acc
                                                                      678
Lys Pro Glu Asn Ile Ser Cys Val Tyr Tyr Tyr Arg Lys Asn Leu Thr
```

40 45 tgc act tgg agt cca gga aag gaa acc agt tat acc cag tac aca gtt 726 Cys Thr Trp Ser Pro Gly Lys Glu Thr Ser Tyr Thr Gln Tyr Thr Val aag aga act tac gct ttc gga gaa aaa cat gat aat tgt aca acc aat 774 Lys Arg Thr Tyr Ala Phe Gly Glu Lys His Asp Asn Cys Thr Thr Asn agt tot aca agt gaa aat ogt got tog tgo tot ttt tto ott oca aga 822 Ser Ser Thr Ser Glu Asn Arg Ala Ser Cys Ser Phe Phe Leu Pro Arg 90 ata acg atc cca gat aat tat acc att gag gtg gaa gct gaa aat gga 870 Ile Thr Ile Pro Asp Asn Tyr Thr Ile Glu Val Glu Ala Glu Asn Gly 105 110 115 gat ggt gta att aaa tct cat atg aca tac tgg aga tta gag aac ata 918 Asp Gly Val Ile Lys Ser His Met Thr Tyr Trp Arg Leu Glu Asn Ile 120 gcg aaa act gaa cca cct aag att ttc cgt gtg aaa cca gtt ttg ggc 966 Ala Lys Thr Glu Pro Pro Lys Ile Phe Arg Val Lys Pro Val Leu Gly 140 atc aaa cga atg att caa att gaa tgg ata aag cct gag ttg gcg cct 1014 Ile Lys Arg Met Ile Gln Ile Glu Trp Ile Lys Pro Glu Leu Ala Pro gtt tca tct gat tta aaa tac aca ctt cga ttc agg aca gtc aac agt 1062 Val Ser Ser Asp Leu Lys Tyr Thr Leu Arg Phe Arg Thr Val Asn Ser 165 170 acc agc tgg atg gaa gtc aac ttc gct aag aac cgt aag gat aaa aac 1110 Thr Ser Trp Met Glu Val Asn Phe Ala Lys Asn Arg Lys Asp Lys Asn 190 caa acg tac aac ctc acg ggg ctg cag cct ttt aca gaa tat gtc ata 1158 Gln Thr Tyr Asn Leu Thr Gly Leu Gln Pro Phe Thr Glu Tyr Val Ile 200 gct ctg cga tgt gcg gtc aag gag tca aag ttc tgg agt gac tgg agc 1206 Ala Leu Arg Cys Ala Val Lys Glu Ser Lys Phe Trp Ser Asp Trp Ser 215 caa gaa aaa atg gga atg act gag gaa gaa ggc aag cta ctc cct gcg 1254 Gln Glu Lys Met Gly Met Thr Glu Glu Glu Gly Lys Leu Leu Pro Ala 230 235 att eee gte etg tet aet etg gtg tagggetget ttgggetaga ettggtgggg 1308 Ile Pro Val Leu Ser Thr Leu Val 250 tttgtcacca cctggttggg aatcatggaa tctcatgacc ccaggggccc cctgtaccat 1368 cgagagtgag cetgcacaac tttgtgcccc aaaggcaaag gatcacattt taatactcat 1428 gaggttetta tactatacat gaaagggtat catateattt gttttgtttt gttttgtttt 1488

21

```
tgagatggag tettaetetg teacecagga tggagtgeag tgatgtgate teggeteaet
                                                                    1548
gccaccacca cctcccgagt tcaagcaatt cttgtgcctc agcctcccaa gtagctggga
                                                                    1608
ttacaggggc ccacgaccat gcccggttga tttttgtatt tttagtagag aagggatatc
                                                                    1668
accatgttgg ctaggctagt cttgaactcc tgacctcagg taatctgccc accttgacct
                                                                    1728
cccaaagtgt tgggattaca ggcgtgagcc actgtgcccc gccaqtatca tatcatctqa
                                                                    1788
aggtatcctg tgataaatta aagatacata ttgtgaatcc tggagctact actcaaaaaa
                                                                    1848
taaataaagg tgtaactaat acaatttaaa aaatcacatt tttaatgaca gtgaggaaag
                                                                    1908
gaaagaggca tggattgcag gttgatggag tgcttactaa gtgtcagtat ggtcattaag
                                                                    1968
agcaacgctt ccagtcagtg gccttggctt aaatcccaag ccaggtgtct ttgggcaaga
                                                                    2028
tacctaaact ctcagttcat tctcagcagt ttcctcgcat ttattcccct tttctatatt
                                                                    2088
gaaatagaat atgtaagttg agtttatagt agtacctatt ttttagtatt attttaaaga
                                                                    2148
ttaaatgaaa taatgtgttt agcccatagt agatattcac taactgctag acttcctatt
                                                                    2208
cttattattt atcctcctac tattattttt aatcctcctt aaagcactat aaaatatgta
                                                                    2268
gagtcactcc cattttggaa atgaggaaac tgagtttcag agatgctaat aaacagctca
                                                                    2328
gggtcactca gcatgtgtta cttttctcaa gagccttgcc cagagtctga ccctcagtgg
                                                                    2388
2440
<210> 4
<211> 252
<212> PRT
<213> Homo sapiens
<400> 4
Met Lys Leu Ser Pro Gln Pro Ser Cys Val Asn Leu Gly Met Met Trp
                                   10
Thr Trp Ala Leu Trp Met Leu Pro Ser Leu Cys Lys Phe Ser Leu Ala
            20
                                25
Ala Leu Pro Ala Lys Pro Glu Asn Ile Ser Cys Val Tyr Tyr Tyr Arg
                            40
Lys Asn Leu Thr Cys Thr Trp Ser Pro Gly Lys Glu Thr Ser Tyr Thr
Gln Tyr Thr Val Lys Arg Thr Tyr Ala Phe Gly Glu Lys His Asp Asn
                    70
                                        75
Cys Thr Thr Asn Ser Ser Thr Ser Glu Asn Arg Ala Ser Cys Ser Phe
                                    90
Phe Leu Pro Arg Ile Thr Ile Pro Asp Asn Tyr Thr Ile Glu Val Glu
                                105
Ala Glu Asn Gly Asp Gly Val Ile Lys Ser His Met Thr Tyr Trp Arg
                            120
Leu Glu Asn Ile Ala Lys Thr Glu Pro Pro Lys Ile Phe Arg Val Lys
    130
                       135
                                           140
Pro Val Leu Gly Ile Lys Arg Met Ile Gln Ile Glu Trp Ile Lys Pro
                    150
Glu Leu Ala Pro Val Ser Ser Asp Leu Lys Tyr Thr Leu Arg Phe Arg
                                   170
Thr Val Asn Ser Thr Ser Trp Met Glu Val Asn Phe Ala Lys Asn Arg
                                185
Lys Asp Lys Asn Gln Thr Tyr Asn Leu Thr Gly Leu Gln Pro Phe Thr
       195
                            200
                                               205
Glu Tyr Val Ile Ala Leu Arg Cys Ala Val Lys Glu Ser Lys Phe Trp
                       215
                                           220
Ser Asp Trp Ser Gln Glu Lys Met Gly Met Thr Glu Glu Glu Gly Lys
                    230
                                        235
                                                           240
Leu Leu Pro Ala Ile Pro Val Leu Ser Thr Leu Val
                245
                                    250
```

<210> 5

```
<211> 30
<212> DNA
<213> Artificial Sequence
<220>
<223> primer
<400> 5
atggaagtca acttcgctaa gaaccgtaag
                                                                          30
<210> 6
<211> 30
<212> DNA
<213> Artificial Sequence
<220>
<223> primer
<400> 6
ccaaacgtac aacctcacgg ggctgcaacc
                                                                          30
<210> 7
<211> 30
<212> DNA
<213> Artificial Sequence
<220>
<223> primer
<400> 7
gtcatagctc tgcgatgtgc ggtcaaggag
                                                                          30
<210> 8
<211> 30
<212> DNA
<213> Artificial Sequence
<220>
<223> primer
agtagettge gttetteete agetatteee
                                                                          30
<210> 9
<211> 30
<212> DNA
<213> Artificial Sequence
<220>
<223> primer
<400> 9
ctttgactcc ttgaccgcac atcgcagagc
                                                                          30
<210> 10
<211> 30
<212> DNA
```

<213> Artificial Sequence	
<220>	
<400> 10 ggttgcagcc ccgtgaggtt gtacgtttgg	30
<210> 11 <211> 27 <212> DNA <213> Artificial Sequence	
<220> <223> primer	
<400> 11 atcagatgaa acaggcgcca actcagg	27
<210> 12 <211> 27 <212> DNA <213> Artificial Sequence	
<220> <223> primer	
<400> 12 tggtttcaca cggaaaatct taggtgg	27
<210> 13 <211> 27 <212> DNA <213> Artificial Sequence	
<220> <223> primer	
<400> 13 gcattcagga cagtcaacag taccagc	27
<210> 14 <211> 27 <212> DNA <213> Artificial Sequence	
<220> <223> primer	
<400> 14 agctggaatc ctcagggtgg ccactgg	27
<210> 15 <211> 27 <212> DNA <213> Artificial Sequence	

<220> <223> primer <400> 15 gcccatcacc agagtagaca ggacqqq 27 <210> 16 <211> 2119 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (11)...(1996) <400> 16 cccctgatac atg aag ctc tct ccc cag cct tca tgt gtt aac ctg ggg 49 Met Lys Leu Ser Pro Gln Pro Ser Cys Val Asn Leu Gly 1 atg atg tgg acc tgg gca ctg tgg atg ctc ccc tca ctc tgc aaa ttc 97 Met Met Trp Thr Trp Ala Leu Trp Met Leu Pro Ser Leu Cys Lys Phe age etg gea get etg eea get aag eet gag aac att tee tgt gte tae 145 Ser Leu Ala Ala Leu Pro Ala Lys Pro Glu Asn Ile Ser Cys Val Tyr tac tat agg aaa aat tta acc tgc act tgg agt cca gga aag gaa acc 193 Tyr Tyr Arg Lys Asn Leu Thr Cys Thr Trp Ser Pro Gly Lys Glu Thr 50 agt tat acc cag tac aca gtt aag aga act tac gct ttt gga gaa aaa 241 Ser Tyr Thr Gln Tyr Thr Val Lys Arg Thr Tyr Ala Phe Gly Glu Lys 65 cat gat aat tgt aca acc aat agt tct aca agt gaa aat cgt gct tcg 289 His Asp Asn Cys Thr Thr Asn Ser Ser Thr Ser Glu Asn Arg Ala Ser 80 85 tgc tct ttt ttc ctt cca aga ata acg atc cca gat aat tat acc att 337 Cys Ser Phe Phe Leu Pro Arg Ile Thr Ile Pro Asp Asn Tyr Thr Ile 95 100 gag gtg gaa gct gaa aat gga gat ggt gta att aaa tct cat atg aca 385 Glu Val Glu Ala Glu Asn Gly Asp Gly Val Ile Lys Ser His Met Thr 110 115 125 tac tgg aga tta gag aac ata gcg aaa act gaa cca cct aag att ttc 433 Tyr Trp Arg Leu Glu Asn Ile Ala Lys Thr Glu Pro Pro Lys Ile Phe 130 135 cgt gtg aaa cca gtt ttg ggc atc aaa cga atg att caa att gaa tgg 481 Arg Val Lys Pro Val Leu Gly Ile Lys Arg Met Ile Gln Ile Glu Trp 150 ata aag cct gag ttg gcg cct gtt tca tct gat tta aaa tac aca ctt 529

Ile	Lys	Pro 160	Glu	Leu	Ala	Pro	Val 165	Ser	Ser	Asp	Leu	Lys 170	Tyr	Thr	Leu	
					aac Asn											577
					aaa Lys 195											625
			_		gtc Val		_	-	_	_		_	_			673
			_	_	tgg Trp	_		_		-		_			_	721
					ctg Leu											769
			-		cca Pro			-			-	_	-	_		817
					aaa Lys 275											865
	-				ctc Leu		-		_					_	_	913
					gga Gly											961
					aag Lys											1009
					ttt Phe											1057
					gtg Val 355											1105
					gaa Glu											1153
					tct Ser											1201



			385					390					395				
								tgc Cys								1	1249
								cca Pro								1	1297
								cct Pro]	1345
	-	_	_	-	_			tgg Trp					-	-	-	1	1393
					-			acc Thr 470					-	_		1	1441
					_		-	aat Asn		_		_	_			-	1489
	-		_		_			tct Ser			_	_	-	_	_	1	1537
_		_	-					ggg Gly		-				_		-	1585
								atc Ile								-	1633
								ctg Leu 550								-	1681
				_			_	tgt Cys				_				:	1729
								cat His									1777
cta Leu 590	aac Asn	ctg Leu	aag Lys	gag Glu	tct Ser 595	gat Asp	gac Asp	tct Ser	gtg Val	aac Asn 600	aca Thr	gaa Glu	gac Asp	agg Arg	atc Ile 605	:	1825
								gac Asp								-	1873

WI

gtg gtg aac ttt ggg aat gtt ctg caa gaa att ttc aca gat gaa gcc 1921 Val Val Asn Phe Gly Asn Val Leu Gln Glu Ile Phe Thr Asp Glu Ala aga acg ggt cag gaa aac aat tta gga ggg gaa aag aat ggg act aga 1969 Arg Thr Gly Gln Glu Asn Asn Leu Gly Gly Glu Lys Asn Gly Thr Arg 640 att ctg tct tcc tgc cca act tca ata taagtgtgga ctaaaatgcg 2016 Ile Leu Ser Ser Cys Pro Thr Ser Ile agaaaggtgt cctgtggtct atgcaaatta gaaaggacat gcagagtttt ccaactagga agactgaatc tgtggcccca agagaaccat ctccgaagac tgg 2119 <210> 17 <211> 662 <212> PRT <213> Homo sapiens <400> 17 Met Lys Leu Ser Pro Gln Pro Ser Cys Val Asn Leu Gly Met Met Trp 10 Thr Trp Ala Leu Trp Met Leu Pro Ser Leu Cys Lys Phe Ser Leu Ala 25 Ala Leu Pro Ala Lys Pro Glu Asn Ile Ser Cys Val Tyr Tyr Tyr Arg 40 45 Lys Asn Leu Thr Cys Thr Trp Ser Pro Gly Lys Glu Thr Ser Tyr Thr Gln Tyr Thr Val Lys Arg Thr Tyr Ala Phe Gly Glu Lys His Asp Asn 70 Cys Thr Thr Asn Ser Ser Thr Ser Glu Asn Arg Ala Ser Cys Ser Phe Phe Leu Pro Arg Ile Thr Ile Pro Asp Asn Tyr Thr Ile Glu Val Glu 100 105 Ala Glu Asn Gly Asp Gly Val Ile Lys Ser His Met Thr Tyr Trp Arg 120 Leu Glu Asn Ile Ala Lys Thr Glu Pro Pro Lys Ile Phe Arg Val Lys 135 140 Pro Val Leu Gly Ile Lys Arg Met Ile Gln Ile Glu Trp Ile Lys Pro 150 155 Glu Leu Ala Pro Val Ser Ser Asp Leu Lys Tyr Thr Leu Arg Phe Arg 170 Thr Val Asn Ser Thr Ser Trp Met Glu Val Asn Phe Ala Lys Asn Arg 185 190 Lys Asp Lys Asn Gln Thr Tyr Asn Leu Thr Gly Leu Gln Pro Phe Thr Glu Tyr Val Ile Ala Leu Arg Cys Ala Val Lys Glu Ser Lys Phe Trp 215 220 Ser Asp Trp Ser Gln Glu Lys Met Gly Met Thr Glu Glu Glu Ala Pro 230 235 Cys Gly Leu Glu Leu Trp Arg Val Leu Lys Pro Ala Glu Ala Asp Gly 250 245 Arg Arg Pro Val Arg Leu Leu Trp Lys Lys Ala Arg Gly Ala Pro Val 265 Leu Glu Lys Thr Leu Gly Tyr Asn Ile Trp Tyr Tyr Pro Glu Ser Asn

Q1

```
280
       275
Thr Asn Leu Thr Glu Thr Met Asn Thr Thr Asn Gln Gln Leu Glu Leu
                       295
His Leu Gly Gly Glu Ser Phe Trp Val Ser Met Ile Ser Tyr Asn Ser
                   310
                                      315
Leu Gly Lys Ser Pro Val Ala Thr Leu Arg Ile Pro Ala Ile Gln Glu
                                  330
Lys Ser Phe Gln Cys Ile Glu Val Met Gln Ala Cys Val Ala Glu Asp
           340
                               345
Gln Leu Val Val Lys Trp Gln Ser Ser Ala Leu Asp Val Asn Thr Trp
                           360
                                             365
Met Ile Glu Trp Phe Pro Asp Val Asp Ser Glu Pro Thr Thr Leu Ser
                       375
                                          380
Trp Glu Ser Val Ser Gln Ala Thr Asn Trp Thr Ile Gln Gln Asp Lys
                   390
                                       395
Leu Lys Pro Phe Trp Cys Tyr Asn Ile Ser Val Tyr Pro Met Leu His
                                   410
Asp Lys Val Gly Glu Pro Tyr Ser Ile Gln Ala Tyr Ala Lys Glu Gly
           420
                               425
Val Pro Ser Glu Gly Pro Glu Thr Lys Val Glu Asn Ile Gly Val Lys
                           440
Thr Val Thr Ile Thr Trp Lys Glu Ile Pro Lys Ser Glu Arg Lys Gly
                       455
                                          460
Ile Ile Cys Asn Tyr Thr Ile Phe Tyr Gln Ala Glu Gly Gly Lys Gly
                   470
                                      475
Phe Ser Lys Thr Val Asn Ser Ser Ile Leu Gln Tyr Gly Leu Glu Ser
               485
                                   490
Leu Lys Arg Lys Thr Ser Tyr Ile Val Gln Val Met Ala Ser Thr Ser
                               505
Ala Gly Gly Thr Asn Gly Thr Ser Ile Asn Phe Lys Thr Leu Ser Phe
                           520
Ser Val Phe Glu Ile Ile Leu Ile Thr Ser Leu Ile Gly Gly Leu
                       535
Leu Ile Leu Ile Ile Leu Thr Val Ala Tyr Gly Leu Lys Lys Pro Asn
                   550
                                       555
Lys Leu Thr His Leu Cys Trp Pro Thr Val Pro Asn Pro Ala Glu Ser
                                   570
              565
Ser Ile Ala Thr Trp His Gly Asp Asp Phe Lys Asp Lys Leu Asn Leu
                               585
Lys Glu Ser Asp Asp Ser Val Asn Thr Glu Asp Arg Ile Leu Lys Pro
                           600
Cys Ser Thr Pro Ser Asp Lys Leu Val Ile Asp Lys Leu Val Val Asn
                       615
                                  620
Phe Gly Asn Val Leu Gln Glu Ile Phe Thr Asp Glu Ala Arg Thr Gly
                   630
                                       635
Gln Glu Asn Asn Leu Gly Gly Glu Lys Asn Gly Thr Arg Ile Leu Ser
Ser Cys Pro Thr Ser Ile
           660
<210> 18
<211> 30
<212> DNA
<213> Artificial Sequence
```

41

<220>

<223> primer

<400> 18 cccctgatac atgaagctct ctccccagcc	30
<210> 19 <211> 30 <212> DNA <213> Artificial Sequence	
<220> <223> primer	
<400> 19 ccagtcttcg gagatggttc tcttggggcc	30
<210> 20 <211> 27 <212> DNA <213> Artificial Sequence	
<220> <223> primer	
<400> 20 ctgtgtaagt accaattgtt cccaggc	27
<210> 21 <211> 15 <212> DNA <213> Artificial Sequence	
<220> <223> exemplary motif	
<221> misc_feature <222> 7-9 <223> n = a, t, g, or c	
<400> 21 tggagynnnt ggagy	15
<210> 22 <211> 5 <212> PRT <213> Artificial Sequence	
<220> <223> exemplary motif	
<221> VARIANT <222> 3 <223> Xaa = any amino acid	
<400> 22 Trp Ser Xaa Trp Ser 1 5	

```
<210> 23
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 23
Tyr Thr Val Gln Val Arg
<210> 24
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 24
Tyr Glu Ala Arg Val Arg
1
<210> 25
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 25
Tyr Ser Leu Gln Leu Arg
1
<210> 26
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<221> VARIANT
<222> 3-8
<223> Xaa = any amino acid
<400> 26
Ala Arg Xaa Xaa Xaa Xaa Xaa Gly Thr
<210> 27
<211> 10
<212> PRT
<213> Artificial Sequence
```

```
<220>
<223> exemplary motif
<221> VARIANT
<222> 3-8
<223> Xaa = any amino acid
<400> 27
Val Gln Xaa Xaa Xaa Xaa Xaa Gly Tyr
<210> 28
<211> 10
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<221> VARIANT
<222> 3-8
<223> Xaa = any amino acid
<400> 28
Cys Lys Xaa Xaa Xaa Xaa Xaa Gly Ile
<210> 29
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 29
Trp Ser Glu Trp Ser Pro
<210> 30
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 30
Trp Ser Asp Trp Ser Glu
<210> 31
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
```

```
<223> exemplary motif
<400> 31
Trp Ser Pro Trp Ser Gln
<210> 32
<211> 6
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 32
Tyr Val Ile Ala Leu Arg
<210> 33
<211> 5
<212> PRT
<213> Artificial Sequence
<220>
<223> exemplary motif
<400> 33
Trp Ser Asp Trp Ser
<210> 34
<211> 459
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (211)...(399)
<221> misc_feature
<222> 281, 376, 420
<223> n = A, T, C or G
<400> 34
ttggtggttc atggtgatgt tctatatctg tgtaagtacc aattgttccc aggcacatat
                                                                        60
ggaagtctgt taataaaaat gatatatttt aaaatttgat ttagagtgtt actagttcta
                                                                       120
aaaatgtaaa agtacactag gtagtgaaga ggaaaatggg aggataacgt gtggtctcca
                                                                       180
tttcagttta cgattgtctc tgtcttgtag atg gaa gtc aac ttc gct aag aac
                                                                       234
                                   Met Glu Val Asn Phe Ala Lys Asn
cgt aag gat aaa aac caa acg tac aac ctc acg ggg ctg caa cct tnt
                                                                       282
Arg Lys Asp Lys Asn Gln Thr Tyr Asn Leu Thr Gly Leu Gln Pro Xaa
     10
                         15
aca gaa tat gtc ata gct ctg cga tgt gcg gtc aag gag tca aag ttc
                                                                       330
Thr Glu Tyr Val Ile Ala Leu Arg Cys Ala Val Lys Glu Ser Lys Phe
```

```
25
                     30
                                         35
                                                              40
                                                                      378
tgg agt gac tgg agc caa gaa aaa atg gga atg act gag gaa gaa ngc
Trp Ser Asp Trp Ser Gln Glu Lys Met Gly Met Thr Glu Glu Kaa
aaq cta ctt cct gcg att ccc gtcctgtctg ctctggtgta nggctgctct
                                                                      429
Lys Leu Leu Pro Ala Ile Pro
gcgctaaact tggtggtgtc tgcaccaccg
                                                                      459
<210> 35
<211> 63
<212> PRT
<213> Homo sapiens
<220>
<221> VARIANT
<222> 24, 54
<223> Xaa = any amino acid
<400> 35
Met Glu Val Asn Phe Ala Lys Asn Arg Lys Asp Lys Asn Gln Thr Tyr
                                    10
Asn Leu Thr Gly Leu Gln Pro Xaa Thr Glu Tyr Val Ile Ala Leu Arg
Cys Ala Val Lys Glu Ser Lys Phe Trp Ser Asp Trp Ser Gln Glu Lys
                            40
Met Gly Met Thr Glu Glu Kaa Lys Leu Leu Pro Ala Ile Pro
<210> 36
<211> 42
<212> PRT
<213> Homo sapiens
<400> 36
Ser Phe Thr Val Gln Asp Leu Lys Pro Phe Thr Glu Tyr Val Phe Arg
                                    10
Ile Arg Cys Met Lys Glu Asp Gly Lys Gly Tyr Trp Ser Asp Trp Ser
Glu Glu Ala Ser Gly Ile Thr Tyr Glu Asp
<210> 37
<211> 37
<212> PRT
<213> Homo sapiens
<400> 37
Leu Asp Lys Leu Asn Pro Tyr Thr Leu Tyr Thr Phe Arg Ile Arg Cys
Ser Thr Glu Thr Phe Trp Lys Trp Ser Lys Trp Ser Asn Lys Lys Gln
            20
                                25
His Leu Thr Thr Glu
```

35

```
<210> 38
<211> 42
<212> PRT
<213> Homo sapiens
<400> 38
Asn Gly Glu Tyr Phe Leu Ser Glu Leu Glu Pro Ala Thr Glu Tyr Met
                                    10
Ala Arg Val Arg Cys Ala Asp Ala Ser His Phe Trp Lys Trp Ser Glu
Trp Ser Gly Gln Asn Phe Thr Thr Leu Glu
                            40
<210> 39
<211> 45
<212> PRT
<213> Homo sapiens
<400> 39
Ala Lys Gly Arg His Asp Leu Leu Asp Leu Lys Pro Phe Thr Glu Tyr
Glu Phe Gln Ile Ser Ser Lys Leu His Leu Tyr Lys Gly Ser Trp Ser
          20
                               25
Asp Trp Ser Glu Ser Leu Arg Ala Gln Thr Pro Glu Glu
<210> 40
<211> 51
<212> PRT
<213> Homo sapiens
Asn Gln Thr Ser Cys Arg Leu Ala Gly Leu Lys Pro Gly Thr Val Tyr
Phe Val Gln Val Arg Cys Asn Pro Phe Gly Ile Tyr Gly Ser Lys Lys
                                25
Ala Gly Ile Trp Ser Glu Trp Ser His Pro Thr Ala Ala Ser Thr Pro
       35
Arg Ser Gly
    50
```